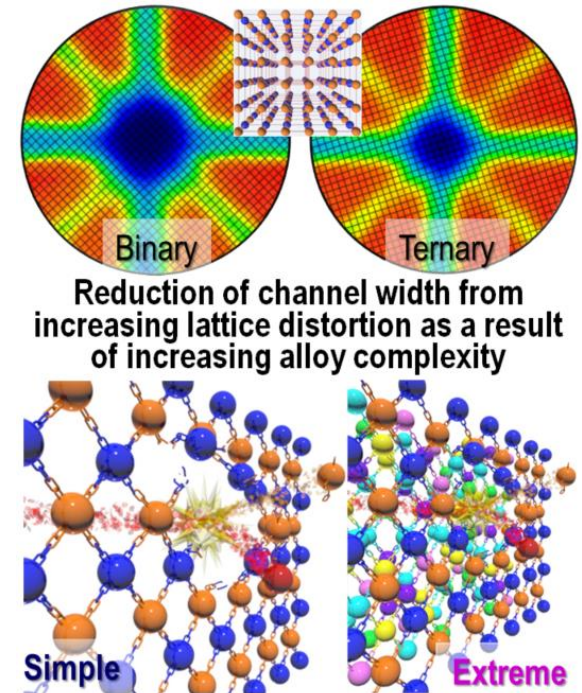


# Energy Dissipation to Defect Evolution (EDDE)

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**EFRC Mission:** To develop a foundation of energy dissipation mechanisms in tunable concentrated solid-solution alloys, to control the early stage processes of radiation damage formation and defect evolution, and to yield new design principles and accelerate science-based material discovery of radiation-tolerant structural alloys for energy applications.

<http://edde.ornl.gov/>



### RESEARCH PLAN

**Challenge:** To improve structural alloy performance in a radiation environment for safe and economical operation.

**Approach:** To understand energy dissipation through electron and phonon interactions, and how they are influenced by alloy complexity.

**Outcome:** New design principles for radiation-tolerant structural alloys.